NAME   DATE   PERIOD

Unit 6, Lesson 1: Relationships between Quantities

1. Lin and Tyler are drawing circles. Tyler's circle has twice the diameter of Lin's circle. Tyler thinks that his circle will have twice the area of Lin's circle as well. Do you agree with Tyler?

   (from Unit 3, Lesson 7)

2. Jada and Priya are trying to solve the equation $\frac{2}{3} + x = 4$.

   ○ Jada says, "I think we should multiply each side by $\frac{3}{2}$ because that is the reciprocal of $\frac{2}{3}$."

   ○ Priya says, "I think we should add $-\frac{2}{3}$ to each side because that is the opposite of $\frac{2}{3}$."

   a. Which person's strategy should they use? Why?

   b. Write an equation that can be solved using the other person's strategy.

   (from Unit 5, Lesson 15)

3. What are the missing operations?

   a. 48 ? (-8) = (-6)

   b. (-40) ? 8 =(-5)

   c. 12 ? (-2) = 14

   d. 18 ? (-12) = 6

   e. 18 ? (-20) = -2

   f. 22 ? (-0.5) = -11

   (from Unit 5, Lesson 13)

4. In football, the team that has the ball has four chances to gain at least ten yards. If they don't gain at

least ten yards, the other team gets the ball. Positive numbers represent a gain and negative numbers represent a loss. Select **all** of the sequences of four plays that result in the team getting to keep the ball.

    A. 8, -3, 4, 21
    B. 30, -7, -8, -12
    C. 2, 16, -5, -3

(from Unit 5, Lesson 14)

5. A sandwich store charges $20 to have 3 turkey subs delivered and $26 to have 4 delivered.

    a. Is the relationship between number of turkey subs delivered and amount charged proportional? Explain how you know.

    b. How much does the store charge for 1 additional turkey sub?

    c. Describe a rule for determining how much the store charges based on the number of turkey subs delivered.

6. Which question cannot be answered by the solution to the equation $3x = 27$?

    A. Elena read three times as many pages as Noah. She read 27 pages. How many pages did Noah read?

    B. Lin has 27 stickers. She gives 3 stickers to each of her friends. With how many friends did Lin share her stickers?

    C. Diego paid $27 to have 3 pizzas delivered and $35 to have 4 pizzas delivered. What is the price of one pizza?

    D. The coach splits a team of 27 students into 3 groups to practice skills. How many students are in each group?